

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P231997

Luminaire Tested: **FVS4M-4-LD4-35-2STD-PFS125-UNV-EDC1**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P231997  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1706-121-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FVS4M-4-LD4-35-2STD-PFS125-UNV-EDC1  
Description: FAILSAFE FVS LED FIXTURE  
4FT LENGTH, 2-MODULE LED WITH PFS125 LENS  
Light Source: (168) 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

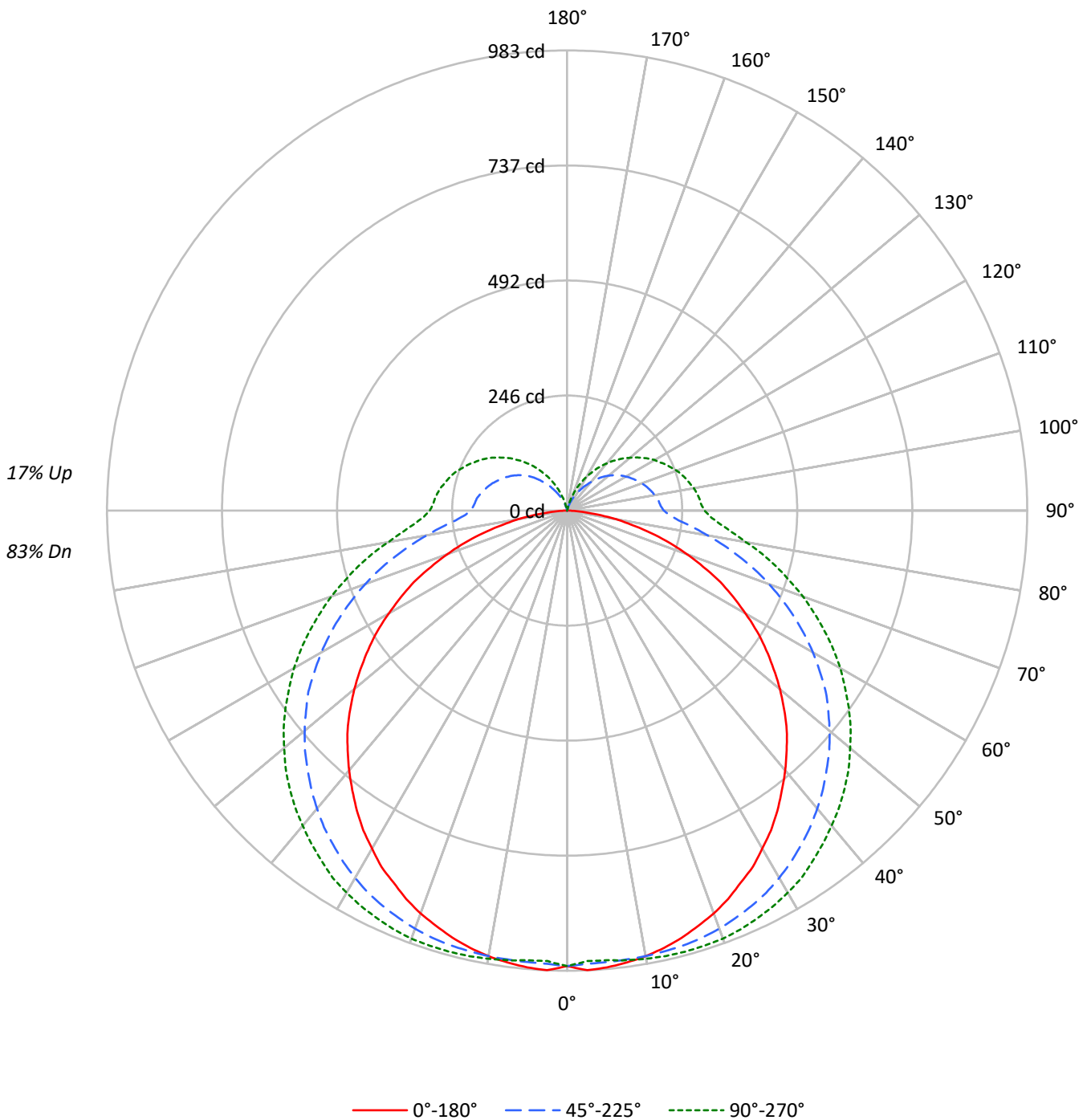
Lumens per Lamp: N/A  
Luminaire Lumens: 4361.0 lumens  
Efficiency: N/A  
Efficacy: 64.6 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.44 / 1.52  
Luminous Opening: Rectangular w/ Sides (W: 0.31' x L: 3.79' x H: 0.19')  
CIE Type: Semi-Direct

Input Watts (W): 67.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	115	115	115	115	110	110	110	110	102	102	102	94	94	94	87	87	87	83
1	103	97	92	88	98	93	89	85	86	82	79	79	76	74	73	71	68	65
2	93	83	76	69	88	80	73	67	74	68	63	68	63	59	63	59	56	52
3	84	72	64	57	80	70	62	55	64	57	52	59	54	49	55	50	46	43
4	76	64	54	47	73	61	53	46	57	49	44	52	46	41	48	43	39	36
5	70	56	47	40	67	54	46	39	50	43	37	47	40	35	43	38	33	31
6	64	51	41	35	61	49	40	34	45	38	32	42	36	31	39	33	29	27
7	59	46	37	30	57	44	36	30	41	34	28	38	32	27	35	30	26	23
8	55	41	33	27	53	40	32	26	37	30	25	35	28	24	32	27	23	21
9	51	38	29	24	49	37	29	23	34	27	22	32	26	21	30	24	20	18
10	48	35	27	21	46	34	26	21	32	25	20	29	24	19	28	22	18	17

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8839	8839	8839
5°	8894	8488	8353
10°	8839	8248	8110
15°	8769	8054	7903
20°	8697	7872	7720
25°	8593	7693	7526
30°	8501	7513	7342
35°	8391	7312	7139
40°	8252	7114	6931
45°	8122	6899	6732
50°	7918	6686	6503
55°	7681	6453	6264
60°	7367	6134	6004
65°	7020	5789	5698
70°	6372	5387	5376
75°	5517	4921	5014
80°	4314	4411	4608
85°	2204	3980	4341



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.7	2.1
10°-20°	272.2	6.2
20°-30°	428.1	9.8
30°-40°	540.1	12.4
40°-50°	594.4	13.6
50°-60°	584.2	13.4
60°-70°	507.8	11.6
70°-80°	377.5	8.7
80°-90°	241.0	5.5
90°-100°	190.3	4.4
100°-110°	168.6	3.9
110°-120°	138.5	3.2
120°-130°	104.1	2.4
130°-140°	68.5	1.6
140°-150°	37.0	0.8
150°-160°	14.0	0.3
160°-170°	1.9	0.0
170°-180°	0.0	0.0
0°-30°	793.0	18.2
0°-40°	1333.1	30.6
0°-60°	2511.7	57.6
0°-90°	3638.0	83.4
90°-120°	497.4	11.4
90°-150°	707.1	16.2
90°-180°	723.0	16.6
0°-180°	4361.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	973	973	973	973	973	
5°	980	976	968	970	964	93
15°	945	950	962	977	975	267
25°	877	901	932	959	961	405
35°	783	822	871	908	914	490
45°	664	718	784	829	838	511
55°	519	592	675	722	734	464
65°	361	443	534	592	606	354
75°	186	278	380	443	463	196
85°	33	133	239	306	327	42
90°	0	98	206	273	293	1
95°	0	92	198	264	284	0
105°	0	81	181	244	263	0
115°	0	68	158	216	233	0
125°	0	54	131	182	197	0
135°	0	35	99	142	154	0
145°	1	19	62	100	109	1
155°	1	6	29	50	60	0
165°	1	0	5	8	14	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P231997

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	973.0	973.0	973.0	973.0	973.0	973.0	973.0	973.0	973.0	973.0	973.0
2.5°	982.7	981.1	978.7	977.8	978.7	978.7	978.7	977.0	973.0	969.0	969.0
5°	979.5	978.7	975.4	974.6	975.4	976.2	976.2	974.6	971.4	968.2	968.2
7.5°	973.8	973.0	970.6	969.8	971.4	972.2	973.0	971.4	969.8	967.4	968.2
10°	966.6	965.0	963.3	962.5	964.1	966.6	968.2	968.2	967.4	966.6	969.0
12.5°	956.9	956.1	953.7	954.5	956.9	960.9	963.3	965.0	965.0	964.1	968.2
15°	944.8	944.8	943.2	944.0	947.2	952.9	956.9	959.3	960.1	961.7	965.8
17.5°	930.3	931.1	929.5	931.1	937.5	944.0	949.6	952.1	954.5	956.9	962.5
20°	915.8	915.8	914.2	918.2	924.6	932.7	938.3	943.2	946.4	950.4	956.1
22.5°	898.0	898.0	898.0	902.9	910.9	919.0	927.9	933.5	937.5	941.6	948.8
25°	877.1	879.5	878.7	885.9	895.6	906.1	914.2	919.8	926.3	931.9	940.0
27.5°	858.5	856.9	858.5	866.6	877.9	887.6	898.8	905.3	912.6	920.6	928.7
30°	833.6	832.7	836.8	846.4	857.7	870.6	881.1	889.2	898.0	906.1	915.8
32.5°	810.2	807.8	813.4	825.5	836.8	852.1	861.8	870.6	879.5	890.0	899.7
35°	782.8	782.0	788.4	800.5	815.0	829.5	842.4	852.9	861.8	871.4	883.5
37.5°	753.7	757.0	762.6	774.7	790.8	806.1	819.0	829.5	840.0	852.9	865.0
40°	724.7	726.3	732.8	748.1	765.0	781.2	794.9	804.5	819.0	831.1	843.2
42.5°	694.1	693.3	706.2	721.5	737.6	755.4	769.1	782.0	795.7	808.6	821.5
45°	663.5	661.0	673.9	690.9	708.6	727.1	743.3	757.8	770.7	783.6	796.5
47.5°	628.8	629.6	643.3	660.2	679.6	698.1	720.7	729.6	743.3	759.4	772.3
50°	593.3	593.3	609.4	628.0	646.5	668.3	684.4	700.5	717.5	732.0	745.7
52.5°	556.2	559.5	574.0	594.9	616.7	635.2	652.2	671.5	687.6	703.0	716.7
55°	519.2	522.4	540.9	559.5	582.8	602.2	620.7	638.5	655.4	674.7	686.8
57.5°	481.3	486.1	503.0	523.2	545.0	567.5	588.5	605.4	624.0	640.1	655.4
60°	440.2	447.4	463.5	483.7	508.7	531.2	551.4	569.9	588.5	606.2	620.7
62.5°	399.8	406.3	424.0	445.0	470.0	495.0	512.7	535.3	553.8	570.7	586.9
65°	361.2	366.0	385.3	406.3	431.3	453.9	476.4	497.4	515.9	534.5	551.4
67.5°	315.2	324.1	342.6	366.0	391.0	414.4	436.1	458.7	478.8	496.6	513.5
70°	272.5	280.5	299.1	324.1	350.7	376.5	399.0	420.0	441.0	458.7	475.6
72.5°	229.8	238.6	257.2	279.7	307.1	331.3	356.3	379.7	402.3	420.8	437.7
75°	186.2	194.3	215.2	240.2	267.6	289.4	317.6	339.4	361.2	380.5	399.8
77.5°	140.3	152.4	171.7	198.3	224.1	251.5	277.3	300.7	321.7	342.6	362.8
80°	105.6	112.1	130.6	159.6	184.6	212.8	237.0	262.0	285.4	303.9	322.5
82.5°	64.5	74.2	97.5	120.1	150.7	174.9	202.3	226.5	249.1	270.1	287.8
85°	33.1	43.5	63.7	91.1	119.3	147.5	170.9	195.9	218.5	238.6	257.2
87.5°	9.7	19.3	41.9	67.7	95.9	124.1	149.9	174.1	196.7	217.7	236.2
90°	0.0	9.7	31.4	57.2	84.6	112.1	137.9	162.8	185.4	206.4	224.9
92.5°	0.0	8.9	29.0	54.0	81.4	108.0	133.8	158.0	179.8	200.7	219.3
95°	0.0	8.1	27.4	52.4	79.0	105.6	131.4	155.6	177.4	197.5	216.0
97.5°	0.0	7.3	25.8	50.0	76.6	102.4	128.2	152.4	174.1	195.1	213.6
100°	0.0	6.4	25.0	48.4	74.2	99.2	125.0	148.3	170.1	190.2	208.8
102.5°	0.0	5.6	23.4	46.0	70.9	96.7	120.9	144.3	166.1	185.4	204.0
105°	0.0	5.6	21.8	44.3	68.5	93.5	116.9	140.3	161.2	180.6	199.1
107.5°	0.0	4.8	21.0	41.9	66.1	89.5	112.9	135.4	156.4	175.7	193.5
110°	0.0	4.0	19.3	40.3	62.9	86.3	109.6	131.4	151.6	170.1	187.8



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	3.2	17.7	37.9	59.7	82.2	104.8	125.8	145.9	163.6	180.6
115°	0.0	2.4	16.9	35.5	57.2	79.0	100.0	120.9	140.3	158.0	174.1
117.5°	0.0	1.6	15.3	33.1	54.0	75.0	95.9	116.1	134.6	151.6	167.7
120°	0.0	1.6	13.7	31.4	50.8	70.9	91.1	110.4	129.0	145.1	160.4
122.5°	0.0	0.8	12.1	29.0	47.6	66.9	86.3	104.8	121.7	138.7	153.2
125°	0.0	0.8	10.5	26.6	44.3	62.9	81.4	99.2	116.1	131.4	145.9
127.5°	0.0	0.8	8.9	23.4	40.3	58.0	75.8	92.7	109.6	124.1	137.9
130°	0.0	0.8	7.3	21.0	36.3	53.2	70.1	86.3	102.4	116.1	129.8
132.5°	0.0	0.8	5.6	17.7	32.2	47.6	62.9	79.0	93.5	108.0	120.9
135°	0.0	0.0	4.0	15.3	28.2	42.7	56.4	70.9	85.5	99.2	112.1
137.5°	0.8	0.8	3.2	12.9	25.0	37.1	50.8	63.7	76.6	89.5	102.4
140°	0.8	0.8	2.4	10.5	21.0	33.1	44.3	56.4	68.5	79.8	91.1
142.5°	0.8	0.8	1.6	8.1	17.7	28.2	38.7	50.0	60.5	70.1	80.6
145°	0.8	0.8	1.6	5.6	14.5	23.4	33.9	42.7	52.4	62.1	70.1
147.5°	0.8	0.8	0.8	4.0	11.3	19.3	28.2	36.3	45.1	53.2	60.5
150°	0.8	0.8	0.8	3.2	8.9	16.1	23.4	29.8	37.9	44.3	51.6
152.5°	0.8	0.8	0.8	2.4	6.4	12.9	18.5	25.0	30.6	37.1	41.9
155°	0.8	0.8	0.8	1.6	4.0	8.9	14.5	19.3	24.2	29.0	33.9
157.5°	0.8	0.8	0.8	0.8	2.4	5.6	10.5	14.5	18.5	21.8	26.6
160°	0.8	0.8	0.8	0.8	1.6	3.2	6.4	9.7	12.9	16.1	18.5
162.5°	0.8	0.8	0.8	0.0	0.8	1.6	3.2	5.6	8.1	10.5	12.1
165°	0.8	0.8	0.8	0.0	0.0	0.0	0.8	1.6	3.2	4.8	5.6
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	973.0	973.0	973.0	973.0	973.0	973.0	973.0	973.0
2.5°	969.8	970.6	969.8	969.0	967.4	965.8	964.1	963.3
5°	969.8	970.6	969.8	969.8	968.2	966.6	965.0	964.1
7.5°	971.4	972.2	972.2	972.2	972.2	971.4	969.8	969.0
10°	972.2	974.6	975.4	975.4	975.4	974.6	973.8	972.2
12.5°	972.2	975.4	976.2	977.0	977.8	977.0	975.4	974.6
15°	970.6	974.6	976.2	977.0	977.8	977.8	976.2	975.4
17.5°	968.2	972.2	974.6	975.4	977.0	976.2	975.4	974.6
20°	962.5	967.4	970.6	973.0	973.8	974.6	973.8	973.0
22.5°	956.1	960.9	965.0	967.4	969.0	969.8	969.0	968.2
25°	947.2	952.9	957.7	960.1	961.7	963.3	962.5	960.9
27.5°	936.7	942.4	947.2	950.4	953.7	953.7	953.7	952.9
30°	923.0	930.3	935.1	939.2	941.6	943.2	943.2	942.4
32.5°	909.3	916.6	921.4	926.3	928.7	929.5	930.3	931.1
35°	892.4	899.7	906.1	910.1	913.4	915.0	915.0	914.2
37.5°	873.9	882.7	889.2	893.2	898.0	898.0	898.0	897.2
40°	852.9	861.0	869.0	873.9	878.7	879.5	878.7	878.7
42.5°	832.7	840.8	848.1	853.7	856.9	858.5	859.3	860.2
45°	808.6	818.2	825.5	831.9	835.2	837.6	838.4	838.4
47.5°	782.8	793.2	801.3	806.9	811.8	815.0	813.4	815.8
50°	757.8	766.6	776.3	781.2	786.0	790.0	789.2	789.2
52.5°	729.6	738.4	748.1	755.4	759.4	762.6	763.4	763.4
55°	698.9	709.4	719.1	725.5	730.4	732.8	734.4	734.4
57.5°	668.3	678.8	687.6	696.5	701.3	705.4	705.4	703.8
60°	635.2	646.5	656.2	663.5	671.5	672.3	673.1	673.9
62.5°	601.4	612.7	623.1	632.0	636.0	640.1	642.5	640.9
65°	565.9	575.6	589.3	594.9	600.6	603.0	607.0	606.2
67.5°	530.4	542.5	551.4	561.1	567.5	568.3	573.2	570.7
70°	490.1	502.2	515.1	521.6	528.8	531.2	533.7	536.1
72.5°	453.1	465.9	476.4	486.1	490.1	494.2	497.4	498.2
75°	414.4	429.7	437.7	448.2	453.9	457.1	461.9	462.7
77.5°	375.7	389.4	401.5	408.7	416.0	420.0	423.2	426.4
80°	337.8	349.9	363.6	374.0	381.3	384.5	388.6	387.8
82.5°	303.9	317.6	329.7	338.6	346.6	351.5	355.5	355.5
85°	275.7	291.0	300.7	310.4	317.6	322.5	326.5	327.3
87.5°	254.7	268.4	281.3	289.4	297.5	302.3	305.5	306.3
90°	241.8	256.4	268.4	278.1	285.4	290.2	293.4	293.4
92.5°	236.2	249.9	262.8	271.7	278.9	283.8	286.2	287.0
95°	233.0	246.7	258.8	268.4	275.7	280.5	283.0	283.8
97.5°	229.8	243.5	254.7	265.2	271.7	276.5	278.9	279.7
100°	224.9	238.6	250.7	259.6	267.6	271.7	274.1	274.9
102.5°	220.1	233.0	245.1	253.9	261.2	265.2	268.4	268.4
105°	214.4	228.9	239.4	248.3	255.5	260.4	262.0	262.8
107.5°	208.8	222.5	233.8	242.6	249.1	253.1	256.4	256.4
110°	203.1	216.0	226.5	235.4	241.8	245.9	248.3	249.1





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	195.9	208.8	219.3	228.1	233.8	237.8	240.2	240.2
115°	188.6	201.5	212.0	220.9	226.5	230.6	232.2	233.0
117.5°	181.4	193.5	204.0	212.0	217.7	221.7	223.3	223.3
120°	174.1	186.2	195.9	204.0	209.6	212.8	215.2	216.0
122.5°	166.1	177.4	187.0	195.1	200.7	204.0	205.6	206.4
125°	158.0	169.3	178.2	185.4	191.1	194.3	196.7	196.7
127.5°	149.9	160.4	169.3	175.7	180.6	183.8	185.4	186.2
130°	141.1	149.9	158.8	165.3	170.9	173.3	175.7	175.7
132.5°	132.2	141.1	149.1	156.4	159.6	162.8	165.3	165.3
135°	123.3	131.4	139.5	145.1	149.1	152.4	154.0	154.0
137.5°	113.7	122.5	129.8	134.6	138.7	141.1	142.7	143.5
140°	103.2	112.9	118.5	123.3	127.4	129.8	131.4	131.4
142.5°	91.1	100.8	108.0	113.7	116.1	117.7	120.1	120.1
145°	79.8	88.7	97.5	102.4	105.6	107.2	108.0	108.8
147.5°	68.5	76.6	84.6	90.3	93.5	94.3	95.1	95.1
150°	58.0	64.5	71.7	79.0	81.4	83.0	83.8	84.6
152.5°	48.4	53.2	59.7	65.3	70.1	70.9	71.7	71.7
155°	38.7	43.5	47.6	52.4	58.0	58.8	59.7	59.7
157.5°	29.8	33.1	36.3	39.5	44.3	47.6	47.6	48.4
160°	21.0	24.2	25.8	28.2	31.4	35.5	35.5	35.5
162.5°	13.7	15.3	16.9	17.7	19.3	22.6	24.2	24.2
165°	7.3	7.3	8.1	8.9	9.7	10.5	12.9	13.7
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)